REMARKS/ARGUMENTS

1. Request for Continued Examination:

The applicant respectfully requests continued examination of the above-indicated application as per 37 CFR 1.114.

2. Rejection of claims 1, 7, 10-13, and 21 under 35 U.S.C. 103(a):

Claims 1, 7, 10-13, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiyo et al. (US 6,100,545) in view of Yamazaki et al. (US 2003/0062519).

Response:

The applicant would like to point out the patentable differences between claim 1 of the instant application and the cited prior art. Claim 1 recites the limitations of a first reaction layer formed over the upper surface of the metal reflecting layer, a transparent adhesive layer formed over the first reaction layer, and a second reaction layer formed over the transparent adhesive layer, wherein each of the first and second reaction layers is formed to enhance an adhesion provided by the transparent adhesive layer. The first reaction layer is formed to enhance the adhesion between the metal reflecting layer and the transparent adhesive layer, whereas the second reaction layer is formed to enhance the adhesion between the nitride light-emitting stack layer and the transparent adhesive layer.

Chiyo teaches in column 1, lines 61-62 that "Excellent adhesiveness between the AlGaInN type semiconductor and the substrate is required." In column 2, lines 27-35, Chiyo teaches that "a buffer layer for buffering stress is interposed between the Si substrate and the AlGaInN semiconductor layer" Chiyo goes on to say that Ti is a preferred material for the buffer layer, where the buffer layer is formed on a Si substrate, and a GaN type semiconductor layer is formed on the Ti layer.

In his Detailed Description of the Preferred Embodiments in column 10, lines

22-44, Chiyo use the term "buffer layer 3" to refer to the AlGaN layer that is disposed between the Ti layer 2 and the n clad layer 4. However, in the Summary of the Invention in column 2, lines 27-35, Chiyo uses the term "buffer layer" to refer to the layer 2 interposed between the Si substrate 1 and the AlGaInN semiconductor layer 3. Therefore, when Chiyo state that the buffer layer contains the material Ti, this is merely stating that the Ti layer 2 contains the material Ti. Due to the inconsistent terminology used by Chiyo between the Summary of the Invention and the Detailed Description of the Preferred Embodiments, great care should be taken when comparing these two sections to avoid confusion.

Therefore, the buffer layer for buffering stress between the Si substrate and the AlGaInN semiconductor layer (col.2, lines 28-30) refers to the Ti layer 2 and not the buffer layer 3. Moreover, the Ti layer 2 is used as a layer for buffering stress, and therefore the function of the Ti layer is different from that of the first reaction layer recited in claim 1. For these reasons, Chiyo does not teach "a first reaction layer formed over the upper surface of the metal reflecting layer" wherein the first reaction layer is formed to enhance an adhesion provided by the transparent adhesive layer. Chiyo's Ti layer 2 is not analogous to the claimed first reaction layer, and it would not be obvious to use Chiyo's Ti layer 2 to serve as the claimed first reaction layer.

Furthermore, Chiyo's AlGaN buffer layer 3 is an epitaxial layer, similar to the "nitride light-emitting stack layer", and is not analogous to the second reaction layer in the instant application. The AlGaN buffer layer 3 does not provide adhesiveness between Chiyo's AlGaInN semiconductor layer and the substrate. Therefore, it is not proper to use Chiyo's AlGaN buffer layer 3 for anticipating the claimed second reaction layer since the AlGaN buffer layer 3 has a completely different function. For these reasons claim 1 is patentably distinguished from the combination of Chiyo and Yamazaki.

Regarding claim 13, neither Chiyo et al nor Yamazaki et al teach that a "second reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr". The Examiner states that Chiyo et al teach a second

reaction layer (3) comprising a material selected from a group consisting of SiNx, Ti, and Cr in Fig.18 and in column 2, lines 27-35. However, column 2, lines 27-35 only mentions that a buffer layer formed between the Si substrate and an AlGaInN semiconductor layer comprises Ti. As explained above, this "buffer layer" is actually the Ti layer 2, and not the buffer layer 3, as Chiyo teaches in column 10, lines 22-44.

Based on the above reasons, the applicants submit that Chiyo does not teach that the buffer layer 3 contains the material Ti, and therefore, Chiyo does not teach the limitation of "wherein the second reaction layer comprises at least one material selected from a material group consisting of SiNx, Ti, and Cr", as is recited in claim 13.

Claims 2-25 are dependent on claim 1, and should be allowed if claim 1 is allowed. Reconsideration of claims 1-25 is therefore respectfully requested.

Sincerely yours,

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